

DASN (A&LM)'s IUID Education and Training Series

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# Item Unique Identification (IUID) Using the Mark

IUID Center  
Representative  
NSWC Corona, IUID  
Center  
28 JUNE 2012<sup>1</sup>

# Housekeeping

- Please mute your telephone
- Please use the chat box for questions which are critical to the understanding of the presentation
- Please submit any question not requiring immediate attention to CRNA-IUID\_gateway@navy.mil
- Questions will be answered as time permits

# The Very Basics



***There are 2 fundamental,  
critical, abstract  
requirements:***

**1. Unique**

**2. Permanent**

***Almost all your problems will go away and almost  
all your benefits will grow if these two things are<sup>3</sup>***

# Overview

abstract  
concrete

- 1) Scanning is better than typing
- 2) Database-to-Database data mining
- 3) Maintaining Relationships with Barcodes
- 4) Anti-counterfeiting
- 5) Inventory
- 6) Binding IUID to your system
- 7) Serialized Item Management

Scanning is better than  
typing

# The Underlying Thought



- Good Decisions are based on getting good information to the right people in time.
  - Good information is founded on good analysis of high quality data.
  - Getting information to the right people in time requires data to be captured, converted to knowledge and delivered  
**“Data” → “Information” → “Decisions”**

# Data is Not Cheap

- 1) Data Capture**
- 2) Data Storage**
  - media
  - safeguarding
  - retrieval
- 3) Data Analysis**

# Data is Not Cheap

## 1) Data Capture

Machine readable marks

Data accuracy leads to

- Less data scrubbing
- More fidelity in analysis

## 3) Data Analysis

This is not the problem any longer

## 2) Data Storage

- media
- safeguarding
- retrieval

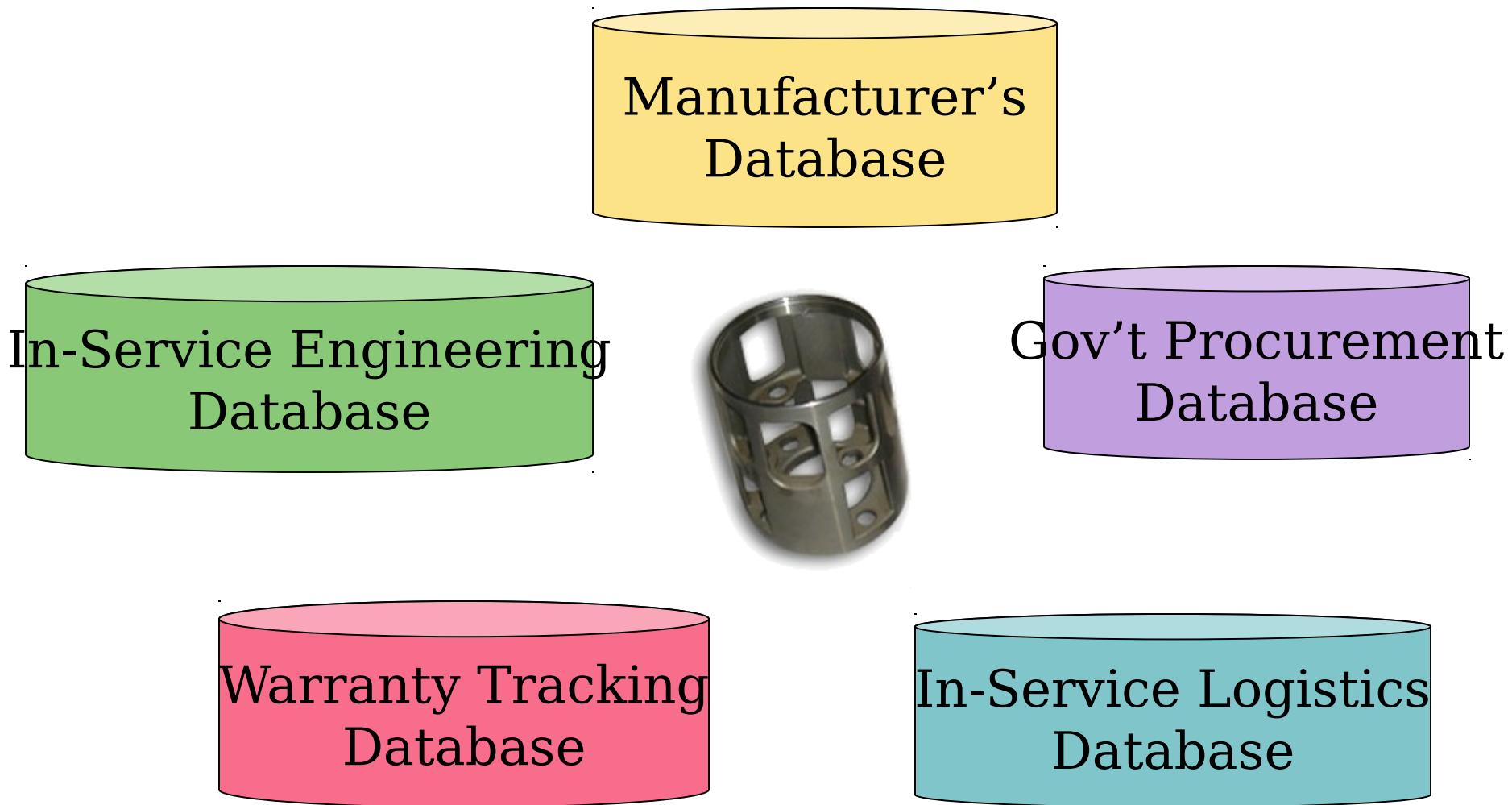
**UID Makes Data Cheaper**

# System-System Communication

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Database-to-Database  
data aggregation

# System-System Communication



**Items often exist within a variety of specialized**

# System-System Communication

Engineering

Test Date  
Test Results  
**Mark/Mod**  
**Serial Number**

Warranty

Terms of Warranty  
**Model Number**  
**Serial Number**

MFR

Acquisition Cost  
**Catalog Number**  
Serial Number



Financial

Contract Number  
Delivery Date  
**Part Number**  
**Serial Number**

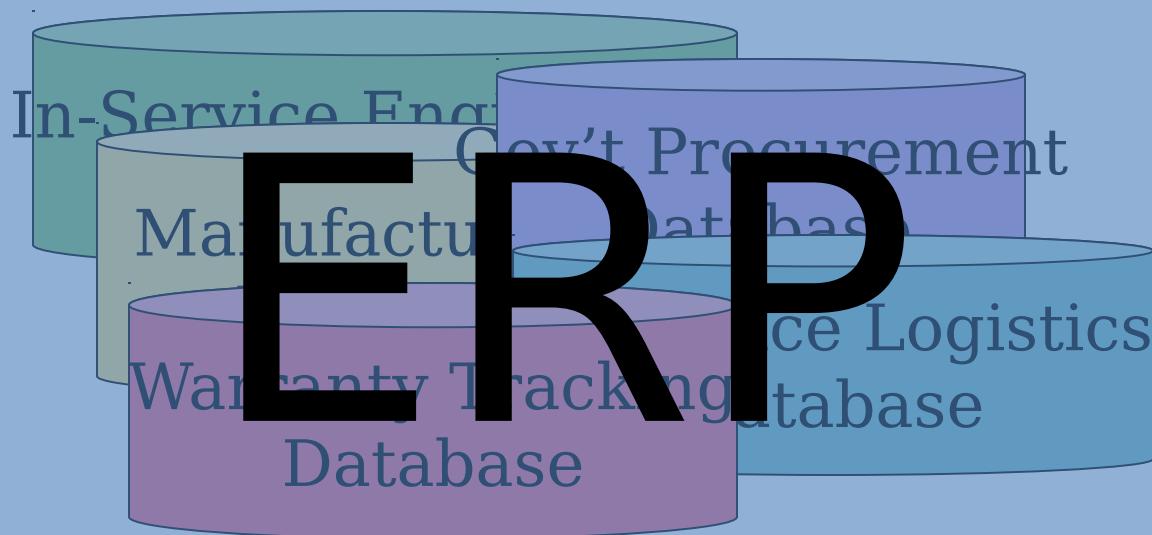
Logistics

Location  
**National Stock Number**  
**Serial Number**

**Specialized databases often cannot “talk” to one another**

# System-System Communication

One way to solve this problem is to pull all of the databases into one over-arching database



# System-System Communication

Engineering

## UII

Test Date  
Test Results  
Mark/Mod  
Serial Number

MFR

## UII

Acquisition Cost  
Catalog Number  
Serial Number



Financial

## UII

Contract Number  
Delivery Date  
Part Number  
Serial Number

Warranty

## UII

Terms of Warranty  
Model Number  
Serial Number

Logistics

## UII

Location  
National Stock Number  
Serial Number

**The UII can allow information from different databases to be used together**

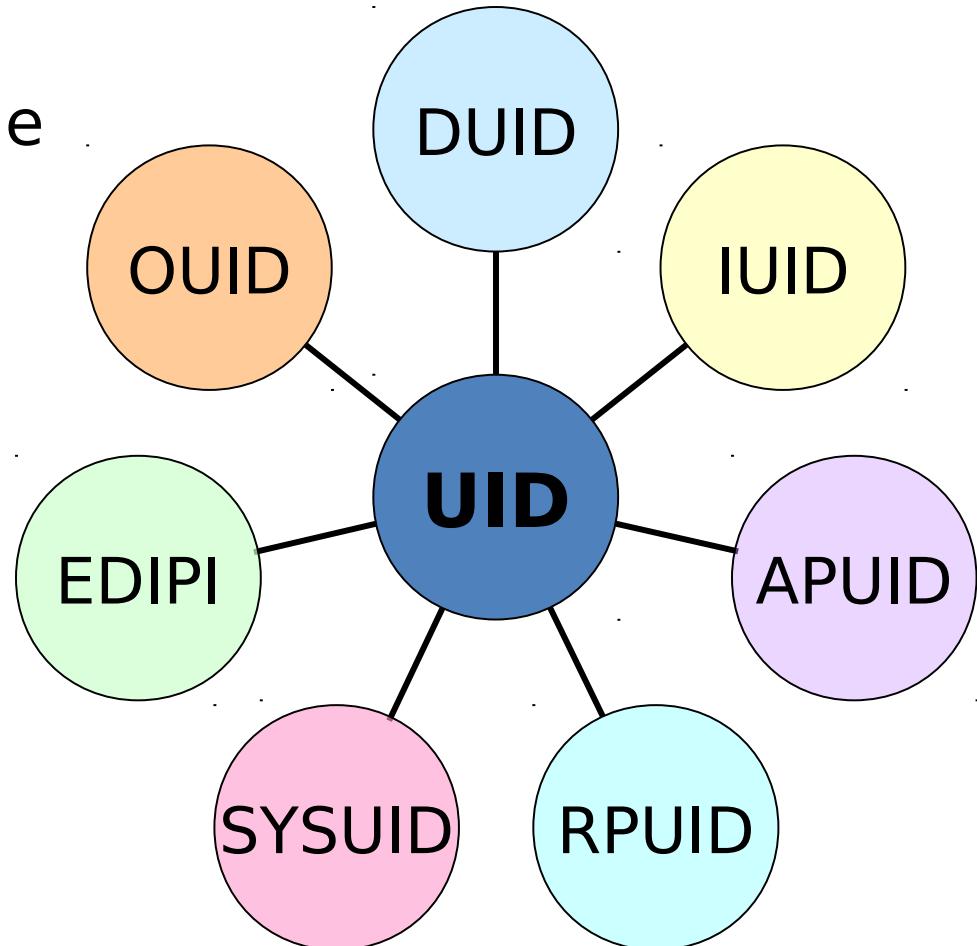
# Relationships

Maintaining Relationships  
with Barcodes

# A Slice of the World of UID

Turns out there are multiple efforts to create unique identifiers.

- Finances
- Items
- Acquisition Programs
- Locations
- Systems
- People
- Organizations



**Many different types of Unique Identification exist**

# Relationships

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- Belonging
  - Item to Item
  - Item to Location
  - Item to Person
  - Location to Location

# Relationships

- Belonging

- Item to Item

Which missile has this  
nuclear warhead?

- Item to Location

What wheels  
were tightened with  
that bad torque wrench?

- Item to Person

What engine is  
in that helicopter?

- Location to Location

# Relationships

- Belonging

- Item to Item

Where is the  
fuse to this  
nuclear warhead?

- Item to Location

How many spare  
parts do I have  
forward deployed?

- Item to Person

- Location to Location

What is in  
my warehouse?

# Relationships

- Belonging

- Item to Item

Who verified all  
the small arms  
were secured?

- Item to Location

- Item to Person

- Location to Location

# When a Marine Needs to Turn in M118... They Turn in M118

**Marines reserialize gages to pass inspection**

**Accountability is lost**

**Errors enter the information system**



**With IUID Reserialization is No Longer  
a Problem**

# Taking Inventory

## Keeping Track of 4860 Items in a Warehouse



### Without Scanning...

- Full inventory never completed
- Sample data estimates 32.4 hours to complete inventory with 2% error rate

### With IUID Scanning...

- Full inventory completed in 6 man hours by first-time scanners
- Experience with scanning decreases inventory time to less than 1 man hour
- Scanning produced 100%



# Bending IUID To Your System

Without a scanner a data matrix is more or less unreadable



When you use a scanner,  
the scanner “looks at” the  
symbol  
and then figures out what it  
is going to “tell” you

It could tell you: [ ])>[RS]06[GS]19VC1234[GS]1PAPN[GS]50001[RS]  
[EOT]

(which is what is encoded in this mark)

Or it could tell you: DC1234APN0001

(which is the UII encoded in this mark)

Or it could tell you: NAVAL SURFACE WARFARE CENTER  
[enter] 1999 Fourth Street [enter] Norco, CA 92860 [tab] [tab]  
[tab] 6/28/2012 [tab] [tab] [tab] [tab] [tab] [tab] [tab] [tab]  
E94913 Widget M/M: APN S/N 0001 [tab] [tab] [tab] [tab] \$2,992

# Bending IUID To Your System

Which may help you to fill in a DD1149 if you were shipping that particular item somewhere.

Microsoft Excel - DD1149.xls

K24

REQUISITION AND INVOICE/SHIPPING DOCUMENT

Form Approved  
OMB No. 0704-0246  
EXPIRES APR 30, 1989

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data resources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0246), Washington, D.C. 20503.

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1. FROM (Include Zip Code)

2. TO- (Include ZIP Code)

3. SHIP TO: MARK FOR

4. APPROPRIATIONS SYMBOL AND SUBHEAD

5. REQUISITION DATE

6. REQUISITION NUMBER

7. DATE MATERIAL REQUIRED

8. PRIORITY

9. AUTHORITY OR PURPOSE

10. SIGNATURE

11a. VOUCHER NUMBER & DATE (YYMMDD)

12. DATE SHIPPED (YYMMDD)

13. MODE OF SHIPMENT

14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR PORT OF REFERENCE NO

16. ITEM NO

17. FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIAL AND/OR SERVICE

18. UNIT OF ISSUE (a)

19. QUANTITY REQUESTED (d)

20. CHARGEABLE ACTIVITY

21. BUREAU CONTROL ACTIVITY NO.

22. BUREAU CONTROL NO

23. AMOUNT

24. TOTAL COST

25. (b)

26. (c)

27. (e)

28. (f)

29. (g)

30. (h)

31. (i)

32. (j)

33. (k)

34. (l)

35. (m)

36. (n)

37. (o)

38. (p)

39. (q)

40. (r)

41. (s)

42. TRANSPORTATION VIA AIRS OR MSTS CHARGEABLE TO

43. ISSUED BY

44. TOTAL CONTAINER

45. TYPE CONTAINER

46. DESCRIPTION

47. TOTAL WEIGHT

48. TOTAL CUBE

49. RECEIVED EXCEPT AS NOTED

50. DATE (YYMMDD)

51. BY

52. QUANTITIES RECEIVED EXCEPT AS NOTED

53. DATE (YYMMDD)

54. BY

55. GRAND TOTAL

56. PACKED BY

57. TOTAL

58. POSTED

59. DATE (YYMMDD)

60. BY

61. 20 RECEIVER'S VOUCHER NO

DD Form 1149, JUN 89

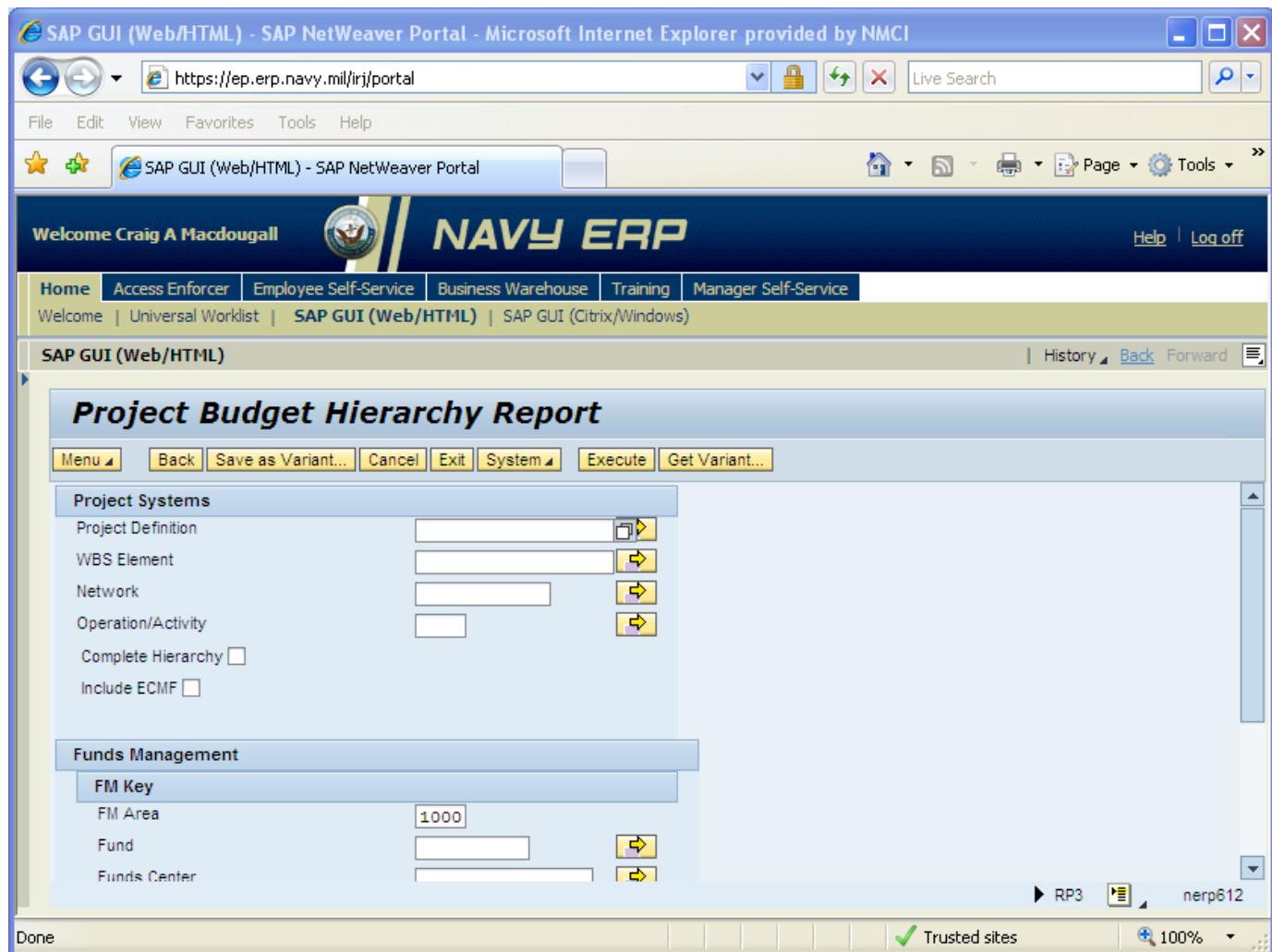
1149 BLANK

Ready

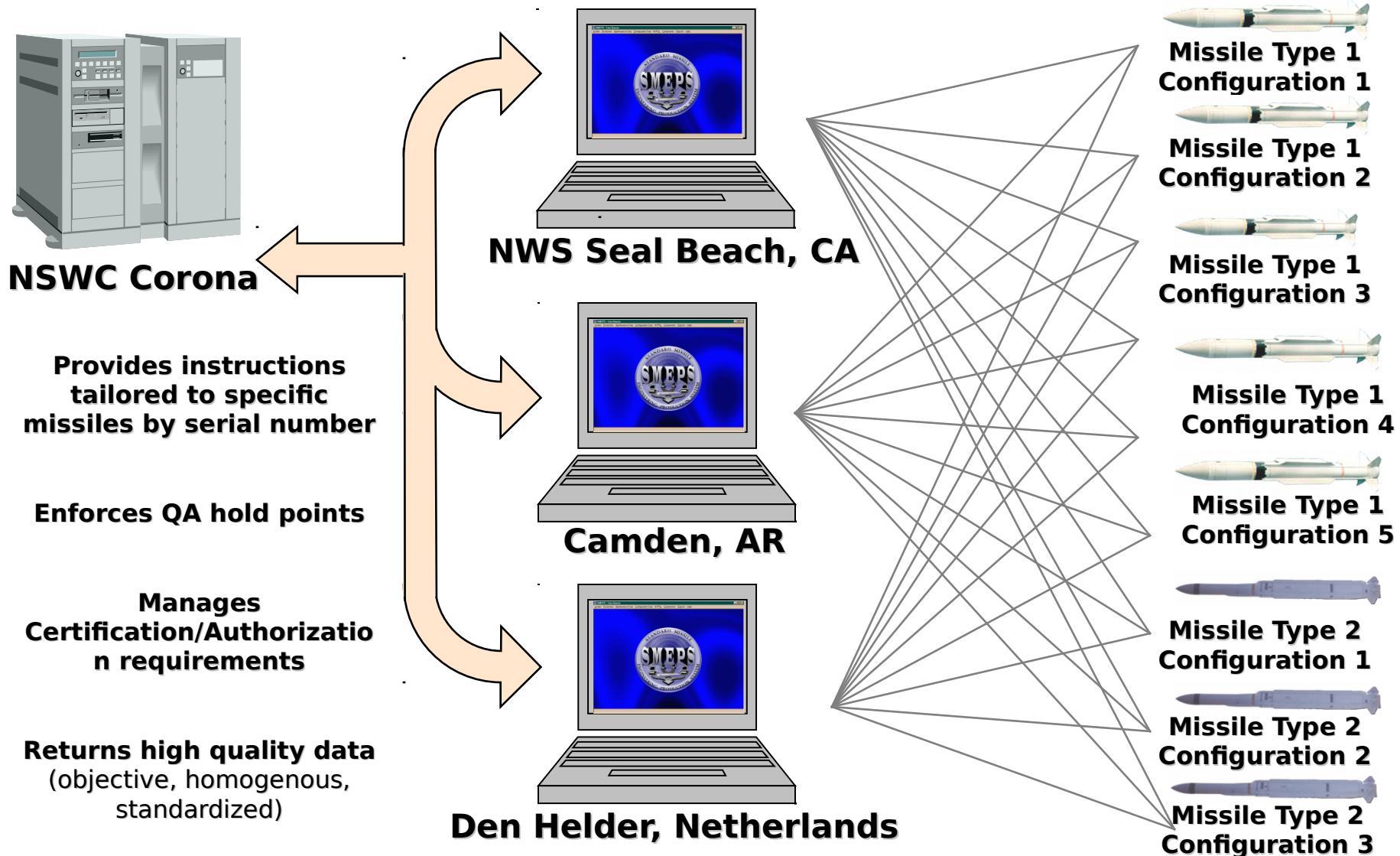
NUM

# Bending IUID To Your System

You may be able to tailor the output to fill in web-based input screens with required data.



# Serialized Item Management



**MANAGING MULTIPLE CONFIGURATIONS AT MULTIPLE SITES**

# IUID Resources

OSD UID Policy Office Website [www.uniqueid.org](http://www.uniqueid.org)

Trusted site for policy, updates, FAQs, and IUID newsletter

DoN IUID Website

[https://acquisition.navy.mil/rda/home/acquisition\\_one\\_source/item\\_unique\\_idenification\\_iuid](https://acquisition.navy.mil/rda/home/acquisition_one_source/item_unique_idenification_iuid)

MIL-STD 130 (current version is N as of Mar 2012)

Marking standards and requirements

DoD Guide to Uniquely Identifying Items (currently v2.0 as of Mar 2012)

Business rules, additional guidance for legacy items

IUID Toolkit [www.iuidtoolkit.com](http://www.iuidtoolkit.com)

Role based roadmaps for IUID implementation

Defense Acquisition University (DAU) [www.dau.mil](http://www.dau.mil)

Continuous Learning Courses (CLM200, CLE 040) to increase IUID



# QUESTIONS & ANSWERS